Lead Feature

Huntress Explains Newest Vision of NASA Space Science

Diane E. Miller, Science Writer, Jet Propulsion Laboratory

Wes Huntress, NASA Associate Director for Space Science, was hosted by the Caltech Management Association for an April 17 talk in Jet Propulsion Laaboratory's (JPL) Von Kaarman Auditorium on "The Future Direction of NASA's Space Science Program." To a standing-room-only audience, he began by reviewing the cold war from the early 50's through the breakup of the Soviett Union in 1991 as the driving force behind the space program. According to Huntress, the space program almost broke the US economy and contributed to the breaking of the Soviet ecomomy.

Renewed interest, new drivers

Since '91 NASA has had to work hard to justify the continued exploration of space. With the recent discovery of possible evidence of one-time primitive life forms on Mars, Congress and the American people have shown new interest in space exploration, particularly with respect to the origins of life and the probablitty of it's existence elsewhere in the universe, even in our own solar system. Say Huntrress, "NASA must recognize and respond to the needs and desires of its' stakeholders—the public, scientists, and Congress. NASA's products are intangible, but extremely valuable: discovery, the knowledge that comes from it, adventure, and the vision of a better future."

Because the cold war no longer drives NASA's budget allocations, space science missions are being done differencly. Instead of being mission driven at almost any cost, they are now cost driven. NASA will do no more large missions, such as Galileo and Cassini. In the future there will be international cooperation to share costs and missions will incorporate new technologies with managed risk.

"We need to invest to build technology-rich spacecraft, and JPL is the place to do it," Huntress emphasized, referring especially to NASA's New Millennium Program.

New directions

Huntress described NASA's five space science programs: the Mars Exploration Program, the Origins Program, the New Millennium Program, the Discovery Program, and the Outer Planets Program.

The Mars Program (currently flying Mars Global Surveyor and Mars Pathfinder) will gather information from planetary orbiters, flybys, and sample returns that may lead to a more definitive answer to whether there at one time was life on that planet. The Origins Program includes observations from new-generation Earth-and-space-based telescopes and interferometers to detect and image possible Earth-like planets around other stars. The New Millennium Program focuses on research, development, and validation of new, cost-effective spaccraft technologies, such as those that would allow the sspacecraft to operate for long periods with no Earth-based monitoring or intervention. The Discovery missions are low-cost, innovative, solar-system science missions that use advanced, yet proven, technologies, partnering NASA with industry, and providing strong opportunities to promote education and public awareness.

Aftter discussing the space science programs, Huntress explained JPL's role in the NASA organization. JPL is NASA's only Federally-funded research and development center (FFDRC). As an FFDRC, JPL must, according to government policies and restrictions, be given only work for which it has unique capabilities or interest, work that cannot be done by private industry.

In conclusion, Huntress showed the audience what is generally felt to be the most enduring image of the Apollo program, a full-sphere shot of planet Earth floating in space. He then displayed an artist's rendering of what he hopes is the enduring product of the next 20 years of NASA space science, an equally detailed image of an Earth-like planet (which happens to have a ring) floating in space near a different star.

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